

From qrp-1@lehigh.edu Wed Aug 2 19:14:00 1995
From: AE4KN@aol.com
Subject: [2209] .
Message-ID: <950802114323_46237363@aol.com>

Sorry to take up the bandwidth; I was on vacation, and my mailbox filled up.
I can't find the address of the man I was talking to about a article for a newsletter. Anyway, please write back privately; sorry for the hassle.
Thanks de Chris, AE4KN

From qrp-1@lehigh.edu Wed Aug 2 19:14:00 1995
From: "Bill Kelsey - N8ET - Kanga US" <kanga@brutus.bright.net>
Subject: [2193] Another Multiband QRP kit is available
Message-ID: <199508020312.XAA29947@brutus.bright.net>

I can't stand it any longer After watching the discussion on multiband qrp rigs that has been going on I have to get in my 2 cents - and I do have a financial interest in this, so there is NOT the usual disclaimer with this message - HI!

I handle the Hnads Kits from Wales - they have a series of kits modules that will make up a nice 6 band ssb/cw xcvr that will run up to around 15 watts - adjustable to much less than that for the hard-core QRP'er - and will run a milliwatt without the final amp module.

The full info is on my Web page - <http://qrp.cc.nd.edu/kanga/>

I am leaving for a week plus of vacation, so will not be able to generate an ASCII file to email to those of you who can not access the web until the week of Aug 14. I can snail mail catalogs to anyone who gets me their address...

This fall Hands will have a 10 band rig available, which will have the option of a DDS vfo and microprocessor controller, complete with keyer built in the s/w in the microprocessor. I am told by the developers of the rig that there will be a four part article in QST this fall on the complete rig. I have seen draft copies of the first two parts.

Hope I can interest a couple of you in the Hands Kits - I will try to respond to queries I get this week before I head out on vacation - otherwise I'll get the responses out after I get back.

73 - Bill Kelsey - N8ET
Kanga US
kanga@bright.net

419-423-4604

[HTTP://qrp.cc.nd.edu/kanga/](http://qrp.cc.nd.edu/kanga/)

From qrp-1@lehigh.edu Wed Aug 2 19:14:00 1995
From: aa7qy@primenet.com (Roger Hightower)
Subject: [2210] Another neat Ham Radio Web Page
Message-ID: <199508021639.JAA17739@mailhost.primenet.com>

Hi all. While not specifically related to qrp, there is a very nice web page at <http://www.primenet.com/~aa7tq>

Dave keeps expanding this thing, and if we can get him deeper into qrp (he has an HW-9 and accessories) it will get even better.

72, de Roger, AA7QY
aa7qy@primenet.com NorCal #1099
rhigh@aztec.asu.edu

From qrp-1@lehigh.edu Wed Aug 2 19:14:00 1995
From: Rarland@Microserve.com (Rarland)
Subject: [2195] Book Orders (one more time)
Message-ID: <9508020502.AA15232@dungeon.Microserve.Net>

Sorry for taking up the additional bandwidth, but.....after seeing the return of my message on the latest shipment of QRP books, I was appalled and decided to try it again...maybe this time Microserve won't hack it up! (I really hate trying to get use to a new editor!)

Todate, all orders that I have received have been mailed. Over 30 copies went out on Monday (July 31). Several QRPers who's orders went out about a week or so ago, via book rate, have received their copies, so book rate isn't as slow as I've been led to believe.

For anyone who hasn't heard, I have all three volumes on low power comm available at a good discount from the publisher's price.

Vol-I is a beginners guide to QRP \$13.50 including postage.
Vol-II is advanced operating, written by some of the biggest names in the hobby.....AA2U, N4BP, WB8VGE, W4THU, K5VOL, K6MDJ, N6GA, etc. and sells for \$17.00 including postage.
Vol-III is all about gear: com'l/kit, new/used, accessories, software, books, etc. and sells for \$13.50 including postage.

All three volumes are available for \$44.00 including Priority Mail to anywhere in the Conus. Eurpoe/UK add \$14, Carribean add \$10, Asia add \$17 for Air Mail Postage.

NOTE: THESE BOOKS HAVE NO CONSTRUCTION ARTICLES OR PROJECTS. THESE BOOKS ARE FOCUSED ON THE OPERATING SIDE OF THE HOBBY WHICH SELDOM GETS THE PLAY IT DESERVES.

I have plenty of copies, so get your orders in. Christmas is just around the corner! Besides, the IRS needs more money (from me, naturally!).

73 rich

From qrp-1@lehigh.edu Wed Aug 2 19:14:00 1995
From: roy.gregson@usfamily.wa.com (Roy Gregson)
Subject: [2219] CO QRP
Message-ID: <950802130136725@usfamily.wa.com>

Hi Gang... seen the CO QRP club mentioned again, and was reminded that I wanted to join. Only problem is I don't know the address or fees. Anyone help ?
ROY GREGSON W6EMT

From qrp-1@lehigh.edu Wed Aug 2 19:14:00 1995
From: Paul Harden <pharden@aoc.nrao.edu>
Subject: [2213] DATA SHEET: 2N- Cross Reference
Message-ID: <199508021718.LAA14093@zia.aoc.nrao.edu>

DATA SHEET: TRANSISTOR SUBSTITUTIONS

CROSS REFERENCE CHART: COMMON BIPOLAR AND FET TRANSISTORS
* Transistors used in NorCal 40, NN1G, MFJ, etc. QRP rigs

INDUSTRY			PHILLIPS	ECG/NTE	TOSHIBA	MOTOROLA
2N2102	NPN	GPA	2N1893	ECG128	2SC1072	
2N2219	NPN	GPA		ECG123	2SC1385	MPS2219
*2N2222	NPN	GPA		ECG123A	2SC1707	MPS2222
*2N2222A	NPN	GPA		ECG123A	2SC1707A	
2N2894	PNP	MSS		ECG106	2SA562	
2N2905A	PNP	GPA		ECG129	2SA741	
*2N2907	PNP	GPA		ECG159M		MPS2907

*2N2907A	PNP	GPA		ECG159M	2SA1090	MPS2907A
2N3055	NPN	LPA		ECG130	2SC766	
*2N3553	NPN	RFPA		ECG473	2SC597	
*2N3866	NPN	RFA		ECG311	2SC845	
*2N3866A	NPN	RFA		ECG311	2SC845	
2N3904	NPN	GPA		ECG123AP	2SC3731	MPS2713
2N3905	PNP	GPA		ECG159	2SA781	
*2N3906	PNP	GPA		ECG159	2SA781	
2N4401	NPN	GPA		ECG123AP	2SC1071	MPS3565
2N4402	PNP	GPA		ECG159	2SA781	MPS5142
2N4403	PNP	GPA		ECG159	2SA781	MPS5138
2N4407	PNP	GPA	2N4033A	ECG129		
2N4410	NPN	GPA		ECG194		
*2N4416	NFET	RFA	PMBF4416	ECG452	2SK210	
2N5087	PNP	LNA		ECG159	2SA1015	
*2N5109	NPN	RFA	BFR95	ECG278	2SC821, 2SC823	
2N5179	NPN	RFA	BFY90			
2N5457	NFET	GPA	BF245A	ECG457	2SK46(SGD)	
2N5460	PFET	GPA		ECG326		
2N5462	PFET	GPA		ECG326		
*2N5484	NFET	RFA		ECG312	2SK104	
2N5485	NFET	RFA		ECG451	2SK212	
*2N5486	NFET	RFA		ECG312	2SK104	

(Sampling of devices found in Yaesu and Icom rigs)

2SA970	PNP	LNA		ECG290A	
2SA1015	PNP	GPA	2PA1015	ECG290A	
2SA1161	PNP	RFA			
2SC1815	NPN	GPA	2PC1815	ECG85	
2SC2240	NPN	LNA		ECG90	
2SC2348	NPN	RFA			
2SJ105	PFET	GPA	J177		
2SJ107	PFET	ASW	PN4392		
2SJ108	PFET	LNA			
2SK117	NFET	LNA		ECG458	
2SK118	NFET	GPA		ECG458	
2SK330	NFET	RFA			

*MPF102	NFET	RFA	BF245A	ECG451	2SK40
MPF970	PFET	ASW	J174		
MPF971	PFET	ASW	J176		
*MPF3822	NFET	GPA	2N3822	ECG459	2SK30
MPS918	NPN	RFA		ECG108	
MPS2222	NPN	GPA	PN2222	ECG123AP	2SC877
MPS2907	PNP	GPA	PN2907	ECG159	
MPS5771	PNP	HSS			
MPS6568	NPN	RFA		ECG123AP	
MPS6652	PNP	GPA			

MPSA06	NPN	GPA		ECG287	2SC983
MPSA14	NPN	DAR		ECG46	
MPSA92	PNP	GPA		ECG288	
MPSH10	NPN	RFA		ECG229	2SC1123
MPSH69	PNP	RFA			
MPSL01	NPN	GPA	2N5550	ECG194	
MPSL51	PNP	GPA	2N5550	ECG288	
*MRF475	NPN	RFPA		ECG235	2SC1969, 2SC2098
*MRF476	NPN	RFPA		ECG236	2SC1678, 2SC2075
MRF477	NPN	RFPA			
*MRF607	NPN	RFPA	BFQ42	ECG472	2SC320, 2SC628

GPA - Gen. purpose ampl.	LNA - Low noise ampl
RFA - RF ampl (FT>200 MHz)	RFPA- RF Power Amplifier
MSS - Med. Speed Switch	LFPA- Low Freq. Power Ampl.
HSS - High Speed Switch	ASW - Analog Switch
DAR - Darlington Pair	

NOTES:

1. Phillips (formerly Signetics) has recently expanded its line of integrated circuits and discrete semiconductors; devices are prefixed with "PN" to signify Phillips. (i.e. PN2222 = 2N2222)
2. NTE Semiconductors now replaces the "ECG" line and thus part numbers are fully interchangeable (i.e. NTE378 = ECG378).
3. Transistors listed are a) common devices for experimentation, b) used in popular QRP rigs and 3) used in Japanese HF rigs. Most are available from DigiKey and Mouser Electronics.
4. Cross references are usually based on Ic, Pd, Hfe and FT parameters. Specs such as Cin, Cout, Zin, gm, etc. are not usually well matched and thus should be used with caution in RF sensitive circuits where these parameters are important.
5. Information on cross references or substitutions based on personal experience are welcomed.

Updated: 8-95

de Paul NA5N (pharden@nrao.edu)

From qrp-1@lehigh.edu Wed Aug 2 19:14:00 1995

From: Tim Gordish <stugordistr@CRF.CUIS.EDU>

Subject: [2203] Dawn of a New Age

Message-ID: <Pine.PMDF.3.91.950802085639.541085515A-100000@CRF.CUIS.EDU>

Hello QRPers,

Last Saturday, I finally got up the gumption to go take my code test. I had been listening to novice band code for sometime trying to improve my code speed. I passed the 5wpm test easily, but didn't fare as well on the 13wpm. I now stand at the dawn of a new age. I wait expectantly on the verge of becoming a QRP ham.

I have built a small transmitter using a design from the QST QRP Compendium. It shoots forth about a quarter watt at 7120 hz. I have a Grundig YB400 which will act as my receiver, although it's filter is quite wide for cw. My antenna is a simple 40m dipole. This is indeed, simplicity, so I hope that it will be what I need to make my first HF contact.

Tonight I hope to string up the antenna in a local park, and commence operation from Ft. Wayne, IN. If anyone out there doesn't mind their code slow and sloppy, listen for me between 22 and 1 hours UTC on the NorCal calling frequency (hey, what can I say, the crystal was free with membership!).

Now after that plea, I have another. Could anyone help me get my hands on a SBL-1 mixer? That's the only part I'm missing for the "Rock Bending" receiver in last months QST.

73, Wish me luck,

Tim Gordish, KD4URL
ARRL NorCal
stugordistr@crf.cuis.edu

From qrp-1@lehigh.edu Wed Aug 2 19:14:00 1995
From: cmassey@onramp.net (Cleve Massey)
Subject: [2186] DIGITAL VOICE RECORDER
Message-ID: <199508020125.UAA16359@mailhost.onramp.net>

Tnx to all who responded with article info and related matters...this is still the best bunch of folks!!!

cleve-wd5bor

Some people never find it
Some only pretend
But I just want to live
Happily ever after, now and then

From qrp-1@lehigh.edu Wed Aug 2 19:14:00 1995
From: rgobrick@public.compuser.com (Robert J. Gobrick)
Subject: [2187] Great Colorado QRP Club Newsletter
Message-ID: <199508020131.XAA24273@public.compuser.com>

QRP-1 Gang,

I just can't keep this in anymore... after finally getting around to reading my latest issue of the Colorado QRP Club "Low Down" newsletter (reported by Chuck here two weeks ago) I would like to openly congratulate Rich High WOHEP and the CO gang for a great newsletter.

A sampling:

Rich was able to capture famous qrp-ler Paul Harden NA5N and have him write a series of four articles on the circuit analysis of the the K1BQT/NN1G/N6KR/W6EMT NE-602 transceivers. Even if you're not an rf hot-shot like Mr Paul it makes for some very interesting reading on what it takes for those quoted qrp champs to build a rig. In the first edition Paul goes into what it takes to design the NE-602 front end, next issue the IF amp/audio amp, 3rdish (Nils type word) xmtr mixer and 4thish t/r, agc,rit. This is going to be an exciting series - enough to want you to join the CO QRP club to get this great newsletter. Just so this doesn't cut into circulation maybe after all four articles are published we can get Paul and Rich to archive this series in the qrp-1 WWW archives. GREAT JOB guys.

Bunch of other great articles from the gang, local news, building the Norcal 40, cw operation, rtty with a KAM and Argo 509, article on qrp dxpeditioning, and for you HAMSTICK guys a super article on how to modify the Hustler mobile antenna for "killer" qrp cw operation - you'll have to get the mag to read all about it.

I also noticed the the CO QRP club are getting some famous local hams to join - Walt Stinson W0CP is a famous DXer and ARRL section director, and also Gary Breed K9AY (one of the first qrp designers with his A&A kit) has joined and from what I hear gave a talk at the last meeting. Now all Rich has to do is to break Gary away from his editorial work at RF Design magazine to write some more QRP articles.

Also the word on the street is that the Colorado QRP Club, with help from Paul NA5N are working on a top secret (goes along with Paul's work) surface mount qrp transciever that will sandwich on your Timex/Microsoft datawatch so you can radio qrp the internet through your watch... more to come...

Great job guys.

73/72 Bob V01DRB/Wa6ERB

Disclaimer - I am a proud member of the CO QRP club and having lived in Denver for 6 years I know that the guys and gals there have to work harder because of the rarified atmosphere up in the mile high front range - also the fizzle from soda pop makes their heads a little light.

Bob Gobrick - V01DRB/WA6ERB/VE2DRB - Newfoundland, Canada
QRPer Galore - ARCI, GQRP, NORCAL, NEQRP, COQRP, MIQRP, NWQRP

Internet: rgobrick@public.compusult.nf.ca
 bgobrick@terra.nlnet.nf.ca

CompuServe: 70466.1405@compuserve.com

From qrp-1@lehigh.edu Wed Aug 2 19:14:00 1995
From: Craig LaBarge <74740.3166@compuserve.com>
Subject: [2183] MFJ Accessories
Message-ID: <950802004713_74740.3166_EHB63-2@CompuServe.COM>

Jim, WK8G wrote:

>The clincher was that the paddle jack is wired BACKWARDS with the dits and
>dahs on the wrong paddles. At least it is the opposite of all the other
>keyers I own or have ever owned. I didn't want to rewire my Shurr Wabbler or
>Vibroplex Deluxe since I use them with the Logikey CMOS II, so I made up a
>6" cable with male and female 1/8" plug and jack, and I re-reversed the tip
>and ring so it works fine now.

I just installed the keyer in my 9030. While I had the soldering iron out to change the jumper to Curtis B, I modified the board to re-wire the paddle jack. With an Exacto knife, I cut the two traces between the connector and the dit and dah input pins on the chip. Then I soldered two small jumper wires to "criss-cross" these leads.

>Whew! The bottom line is that the 9020 is a great little rig and very nicely
>put together, the accessories suck! For \$40, the keyer is poorly
>constructed. I won't send it back because it works and eliminates another box
>and 3 cables, but I'm disappointed.

Although the accessories (at least the ones I bought) are functional, I'd have to agree that the construction quality was lacking. The soldering on the keyer board was really sloppy (sloppier than mine!). A while back I bought the filter board for my 9040. The mounting holes didn't line up with the stand-offs in the rig, so I had to work the board over with a reamer to get it installed.

73, Craig WB3GCK

From qrp-1@lehigh.edu Wed Aug 2 19:14:00 1995
From: BFG7AJC@NSDL.BELL-ATL.COM
Subject: [2202] MFJ-971 Experience
Message-ID: <0031600001087593000002*@MHS>

Late yesterday afternoon UPS delivered the MFJ 971 QRP portable tuner I ordered last week from Texas Towers. While looking it over, I noticed the knob on the 'Antenna' capacitor shaft was rubbing the chassis control nut. In contrast, the 'Transmitter' knob was installed too far away from its control nut. Two internal PCB jumpers have to be moved (one for forward and other for reverse) to measure SWR at QRP levels - 6 watts forward and 1.2 watt reverse. I find it interesting that a QRP tuner packaged in a box the same size as and sold as an accessory to their QRP radios is delivered in the 300 watt QRO mode. Maybe it reduces returns of units with bent needles. Anyway, no problem, opened unit, moved jumpers and adjusted knobs on capacitor shafts. I noticed that as assembled by MFJ, the 'Transmitter' and 'Antenna' capacitance goes from highest to lowest through the numerically referenced 1-6 range. I think I've seen it opposite to this on other MFJ products. Didn't change it.

On the air with my OHR WM-1 between the 971 and my SW-40 I noticed that the 971 indicated 1.5 watts forward vs 950 mW on the WM-1. Also, while tuning my half size (51') G5RV, I noticed a shallow/long reverse power "null". I confirmed this by observing the WM-1 reverse power. So off with the 971 cover again, replaced antenna with dummy load, tuned for minimum SWR with WM-1, and adjusted forward power pot on 971 for just a little over 1 watt (best I could do - ran out of pot range - minimum sensitivity). Reversed antenna and transmitter connections on 971 and repeated process for reverse power (had to retune for minimum SWR on WM-1). As calibrated by MFJ, 950 mW indicated a little less than 5 watt on reverse scale. Increased reverse power sensitivity pot on 971 for 1.1 watt on reverse power scale (same as best I could do forward). Much better. Nice quick/deep reverse power null during antenna tuning.

Enough bandwidth here. Sorry about QRM on 40 last night.

BTW, MFJ tech staff claims that they "calibrate" on 15 meters. I asked them before I recalibrated the 30 watt range on my 948 tuner (not enough range/

sensitivity on reverse power pot, however). You may want to do this calibration at 15 meters if you can.

72, Dave, KA3EAJ, bfg7ajc@bell-atl.com

From qrp-1@lehigh.edu Wed Aug 2 19:14:00 1995
From: Chris Gearhart <73370.1677@compuserve.com>
Subject: [2208] More Pixie Info...
Message-ID: <950802152555_73370.1677_FHR105-2@CompuServe.COM>

--- Forwarded Message ---

#: 614599 S0/Outbox File [MAIL]
2-Aug-95 11:19:00
Sb: Pixie
Fm: MAIL
To: W. J. Metevia > INTERNET:METEVIEWIA@homer.yankee.com

Hi Bill,

It turns out that my guesses were correct. The one point of confusion was that the H21J cap was actually an 821J...evidently it didn't get stamped properly.

So in review, here's what we've got:

C1,C2	100pf	101J ("5A" on back)	blue
C3	82pf	82J	blue
C4	.05uf	473 ("K5M" on back)	brown
C5	.01uf	103 K05	brown
C6,C7	820pf	A1A 821J	brown
C8	.1uf	I5M 104	brown

As far as the inductors go:

Wide Silver Brown Gold Black Silver is 1uh
Wide Silver Red Gold Red Silver is 2uh

The tan inductor is 33uh (which I assume gets used in place of the 15-22uh specified in the plans)

I'll be sure to post this on the reflector for anyone else who might be building the Pixie....

72,

Chris, N1HWQ

From qrp-1@lehigh.edu Wed Aug 2 19:14:00 1995
From: adams@chuck.dallas.sgi.com (chuck adams)
Subject: [2191] NC40a from Wilderness
Message-ID: <199508020308.WAA13562@chuck.dallas.sgi.com>

Newbies - the 1.8K resistors that I had in the kit had the same color bodies as the inductors (green), so watch carefully. These 1/4 resistors are smaller than the larger inductors. 1/4W that should be.

Take your time and you should be able to do it in about 6 hours, but that's not important. You want it to work the first time.

gl es dit dit

--

Chuck Adams K5FO CP-60 adams@sgi.com

From qrp-1@lehigh.edu Wed Aug 2 19:14:00 1995
From: Mike.Czuhajewski@bbs.abs.net (Mike Czuhajewski)
Subject: [2192] QRP Q on the streets (I think)
Message-ID: <1995Aug01.230650.24104@abs.net>

I talked with N8DHT last night. There were some problems with getting the July issue out (it is now August, after all), but I believe he said it has been mailed. (I have yet to get my Box-o-Quarterlies.) For what it's worth, Myron reports that Mike Bryce experienced a MAJOR, MAJOR reduction in complaints about subscriptions after we dumped the old printer and went to the one we have now. (Problems with lateness of this and the previous issue were not due to the printer, who is giving us vastly better service than the old one did.) By the way, the worst horror story in recent memory, perhaps 2 years ago, was receiving the October issue the week AFTER Thanksgiving! (Old printer, by the way.) And nothing yet tops 1986, when there simply was NO July issue, period! 73 and Queue Our Pea DE WA8MCQ
(PS--if you haven't received yours in a couple of weeks from now, you

probably have a problem of some sort with your subscription. Anyone with problems should contact Mike Bryce, WB8VGE, good in any callbook going back many years, or any issue of 73 mag in recent years [QRP column], also available on e-mail [though not a subscriber to QRP-l] at 73357.222@compuserve.com. 73....)

--

Mike Czuhajewski, user of the UniBoard System @ abs.net

E-Mail: Mike.Czuhajewski@bbs.abs.net

The WB3FFV Amateur Radio BBS - Located in Baltimore, Maryland USA

Supporting the Amateur Radio Hobby, and TCP/IP InterNetworking

From qrp-l@lehigh.edu Wed Aug 2 19:14:00 1995

From: aa7qy@primenet.com (Roger Hightower)

Subject: [2218] QRP+ mikes

Message-ID: <199508021956.MAA14971@mailhost.primenet.com>

I spoke with a nice lady at Texas Radio Products today, and she said that they had received the list of backordered mikes from Index Labs today.

Texas Radio will begin shipping mikes out today (Wednesday) via priority mail.

72, de Roger, AA7QY

aa7qy@primenet.com

NorCal #1099

rhigh@aztec.asu.edu

From qrp-l@lehigh.edu Wed Aug 2 19:14:00 1995

From: KenKD1XS@aol.com

Subject: [2189] Radiokit

Message-ID: <950801221429_45871045@aol.com>

Is there anyone out there who is having trouble with Radio Kit?. I placed an order on March 1st. I was told that there was a backorder and it would only be a few more weeks. Weeks have turned into months. I only get an answering machine when I call and a certified letter was returned. I was told by one of the owners sons that the owner had a heart attack. He assured me that my refund would be sent in a couple of week. That was 6 weeks ago.

I plan on calling Consumer Protection in New Hampshire tomorrow.

Ken KD1XS

From qrp-1@lehigh.edu Wed Aug 2 19:14:00 1995
From: Rarland@Microserve.com (Rarland)
Subject: [2197] RS MX-50 Headphones/boom mic combo
Message-ID: <9508021131.AA24062@dungeon.Microserve.Net>

Gang:

In the last issue of Nat'l Contest Journal there was a review of the Radio Shack Pro MX-50 headset with boom mic. Last weekend I visited a local RS store and found them to be on sale for \$10 off the regular price of \$59.95 (for those of you in Rio Linda, California the sale price was \$49.95!).

Since I was going to use these with my Argo 509, I wired up a 1/4 stereo plug with two pigtails, one for the PTT line (using a foot switch) and the other for the transmit audio from the boom mic. The stereo phones plug into a 1/8 inch to 1/4 inch stereo adaptor and then into the back of the 509.

My first contact was with W3FU0 in Beltsville, MD about 0600Z this morning. He reported that I was a 57 (this was on 80 meters) but the transmit audio was "boxy", lacking highs. The NCJ article criticized the MX-50s for the same problem. The solution is to install the Heil HC-4 mic element in the boom mic. I had ordered one on Monday from Universal Radio in Reynoldsburg and hopefully, it will be here by Friday so I can swap out the mic elements and use this headset/boom mic combo in the contest on Sunday. Cost of the mic element was about \$22 (I get a discount from Universal) so the total cost of my "poor man's Heil Pro Set" is about half of what it would cost for a real Pro Set.

Since the Argo 509 does not have a speech processor (I'm still looking for a VoMax processor, so if anyone has one for sale or trade let me know), the extra audio punch from the Heil HC-4 element should give me some help punching through the QRM on SSB. More on this later.

Do any of you QRP SSB ops out there use the Heil desk mic with the HC-4/HC-5 elements? If so, what has been your finding as to the readability of your transmit audio and ability to work DX?

73 rich

From qrp-1@lehigh.edu Wed Aug 2 19:14:00 1995

From: Geoff Fox <gfox@ix.netcom.com>
Subject: [2212] sort of off the topic... E-Mail Connection
Message-ID: <199508021708.KAA21003@ix4.ix.netcom.com>

-- [From: Geoff Fox * EMC.Ver #2.5.02] --

I have just stated using E-Mail Connection for my mail and it has a nice feature allowing me to set rules to forward certain mail to their own mailboxes. I'd like to do that with QRP-L, however, since the return address on this list seems to be the person who sent the message, as opposed to the list itself, there is no unifying parameter to use. Has anyone else who uses this application figured a way around it?

73, Geoff WA1U

ps- In a very non-QRP move, I will probably transmit with the highest power ever by a member of this list. It happens tomorrow and Friday as I use the aggregate power of all the ABC Television affiliates. It's one of my quasi-regular fillin stints on Good Morning America. I'll be the one in front of the weather maps.

From qrp-l@lehigh.edu Wed Aug 2 19:14:00 1995
From: CamQRP@aol.com
Subject: [2190] Summer Daze SSB Sprint
Message-ID: <950801223254_45889626@aol.com>

Gang -

Coming up this weekend is the Summer Daze SSB Sprint. Rules are due to appear in the July QQ, which is due to appear... well anyday now.

Here are the abbreviated rules --

QRP ARCI SUMMER DAZE SSB SPRINT

Sponsored by QRP ARC International. 12 Noon to 8 PM, Local Time, August 6, 1995. Operate any 4 hours of the 8 hour period. Entries may be Single Band, All Band, High Band (20, 15, 10 or 6) or Low Band (160, 80 and 40). Work stations once per band. Exchange signal report, state/province/ country, and QRP ARCI number if member, or power output if non-member. 1.810 3.865 7.285 14.285 21.385 28.385 50.130. QSO points: 5 points / QSO with ARCI member, 2 points for non-members same continent, 4 points for non-members different continent. Bonus points awarded for using homebrew equipment, apply for each band on which homebrew equipment was used: +2000 points for HB transmitter; +3000 points for HB receiver; +5000 for HB transceiver. A piece of equipment is considered to be homebrew if you built it. Final score is total of QSO

points (all bands) multiplied by total of states/provinces/countries (all bands) times power multiplier (Power is stated as SSB PEP output: > 10 W output, X1; <10 W output, X 7; <2 W output, X 10; < 500 MW output, X 15), plus bonus points. Include description of equipment and antennas used. Mail entries by September 6, 1995 to QRP ARCI Contest Mgr, Cam Hartford, N6GA, 1959 Bridgeport Ave., Claremont CA 91711, or by e-mail to CamQRP@aol.com.

From qrp-1@lehigh.edu Wed Aug 2 19:14:00 1995
From: "JOHN F. McCLUN" <JFM001@DENTAL3.AB.UMD.EDU>
Subject: [2211] Super CW Station
Message-ID: <9F5CFB77C7@dental3.ab.umd.edu>

To those who want info on N8UAU Super CW Station - I built it shortly after it came out. It consists of a preprogrammed CPU, a couple of other chips and a 2 X 80 display. It has alarm functions, keyer, audio circuit for discrimination of recieved audio and the display of recieved and keyed CW. It works fine except the display is very susceptible to abient light. I've tried using an 8 volt supply for the 5 normally used by this chip, but no success yet. Maybe I'll try a light on the face on the display - we'll see. If you have any other questions e-mail me @ jfm001@dental3.ab.umd.edu

John
N3REY

From qrp-1@lehigh.edu Wed Aug 2 19:14:00 1995
From: burdick@interval.com (Wayne Burdick)
Subject: [2182] survey of Wilderness '40A builders
Message-ID: <199508012354.QAA01651@interval.interval.com>

Hi folks,

Just wanted to remind you that I'm available here on-line if you have quick technical questions about the '40A, problems building one, suggestions, etc.

Here's a quick survey directed to those who have the new '40A. Please send me your response via e-mail.

1. Anything missing from the kit?
2. Any problems during assembly?

3. Anything not clear in the manual?
4. Despite the horrible conditions on 40, how is the critter working?
5. If you measured your power output, final amp efficiency, rx/tx current drain, spectral purity, etc., please send me a brief summary.

Thanks!

Wayne
N6KR

From qrp-1@lehigh.edu Wed Aug 2 19:14:00 1995
From: eleon@msu.edu (Dr.Edgar Leon)
Subject: [2215] Urgent
Message-ID: <ac453fb903021004e0ae@[204.22.210.52]>

Please send no more messages until further notice. I will be out on vacations for 3 weeks. Thanks. Eleon@msu.edu

Edgar Leon
eleon@msu.edu
Michigan Department of Education
Migrant Education Consultant
(517)373-4582 Fax:(517)373-4589

From qrp-1@lehigh.edu Wed Aug 2 19:14:00 1995
From: Paul Harden <pharden@aoc.nrao.edu>
Subject: [2207] Re: Great Colorado QRP Club Newsletter
Message-ID: <199508021523.JAA10287@zia.aoc.nrao.edu>

Thanks Bob for the very nice words on the CQC Low Down and the QRP article series. Nice to know our efforts are appreciated. Since the articles do contain schematic diagrams, oscilloscope and spectrum analyzer waveforms upon which the discussion is based, it's not clear just yet if a pure text version would be beneficial. We're working on that.

Rich WOHEP, Jess N0TFI and myself are bouncing ideas back and forth

for a possible CQC rig project. I have prototyped portions using the new surface mount AD607 and MiniCircuit Labs new VCO series. The VCO approach I think is out ... to achieve a few hundred Hz of tuning resolution would require a very linear multi-turn precision pot (expensive) and an ultra stable power reference in the order of a few tens of uV. It was fun playing with, but too many difficulties keeping it stable.

The AD607 works about like an NE602 with about 100dB of IF amplifiers built in. Neat! A 20-pin surface mounted chip. Like the NE602, it is intended for FM/cell phone communications. All that IF gain has thus far been a little hard to control and of course are meant to be limiters for its FM application. The internal product detector works fairly good. The 3rd order intercept and compression point is also about like the NE602 or basically pretty cruddy (both way below 0dBm) and very prone to overloading. Eventually, we can get it all working reliably (mostly just need TIME!). The real problem is just the logistics of producing a kit with SM components ... beyond what most amateurs can do to mount these devices, thus probably will have to be professionally mounted by a commercial assembly shop, etc. Estimates show this step alone will add about \$25 per board for the preassembly of the surface mounted stuff. One of concerns is if this is done, then we have a board with cute SM components on it, BUT TOTALLY UNTESTED. The chips can't be tested until you finish the rest of the kit. And if one of the SM chips is bad ... then what? Perhaps a mini plug-in board for quick replacement, but then this alters/complicates the RF sensitive part of the circuit. So we've put a lot of work (well, at least thinking) into it.

But I doubt it will ever be the "Dick Tracy" QRP-in-a-watch rig -hi.

I brought in a disk from home today been working on ... cross reference of the common transistors used in QRP rigs to ECG and 2SC part numbers. Will load it up to our main frame later today and post for everyone to hopefully enjoy and perhaps find useful.

Paul NA5N
(Baja Colorado)

From qrp-1@lehigh.edu Wed Aug 2 19:14:00 1995
From: rgobrick@public.compuser.com (Robert J. Gobrick)
Subject: [2217] Re: Great Colorado QRP Club Newsletter
Message-ID: <199508021912.QAA05465@public.compuser.com>

Harvey,

Well with cross-border "free trade" and NAFTA I guess it should be no

problem to subscribe to the Colorado QRP Club newsletter the Low Down from Nova Scotia.

Membership info goes to:

CQC
c/o Mark Meyer
14153 West First Drive
Golden, Colorado 80401

or email WU0L@aol.com

Now if you notice above I didn't talk about price in US dollars - the US Postal Service just raised their rates to Canada and Mexico (NAFTA?) so you'll need to check how much more over \$10 US you'll need to add.

Have fun 73/72 Bob V01DRB/WA6ERB

>Hello Robert:

>

>That looks like a good newsletter for me.Can I subscribe from
>up here in Canada? If so please e-mail me the address.

>

>Have had contacts with 3.5 watts.Two of them with the
>hw-7 and one with the ts-450 pulled down to 4 watts.
>That one was on 14.060.So getting my feet wet.Another
>week and I should have the mfj-9040 here.

Harvey - sounds like things are cooking there - we need a Nova Scotia QRPer on - you'll be very popular to all the guys down in the states as well as Newfoundland (as far as I can tell I may be the only qrp advocate here - hi).

Check into the QRP-1 with any gossip info etc on your qrp activites.

73/72 Bob V01DRB/WA6ERB

Bob Gobrick - V01DRB/WA6ERB/VE2DRB - Newfoundland, Canada
QRPer Galore - ARCI, GQRP, NORCAL, NEQRP, COQRP, MIQRP, NWQRP

Internet: rgobrick@public.compusult.nf.ca
bgobrick@terra.nl.net.nf.ca

Compuserve: 70466.1405@compuserve.com

From qrp-1@lehigh.edu Wed Aug 2 19:14:00 1995
From: JessQRP@aol.com
Subject: [2205] Re: Hamstick-40
Message-ID: <950802110653_46214541@aol.com>

How about that,

I have tried the Hamsticks 17-80 and the key is all in the grounding of the mag mount. I have a 3/4 ton van and used one of those 4 magnet mag mounts in the center of the roof. I goofed and goofed with the adjustments until I ran a ground wire (#12 common braided DC wire) to the door frame and grounded it but good. After that the SWR's on all of the antennas fell right in place and no problem at all to adjust.

Have worked lot's of DX with the Hamsticks and all of my voice contacts on 40 SSB QRO, the guys cannot believe that I am mobile.

Best
Jess

From qrp-1@lehigh.edu Wed Aug 2 19:14:00 1995
From: JCoote@aol.com
Subject: [2194] Re: Hamstick-40 and Autek RF-1, and the Rockloop Tuned Loop antenna
Message-ID: <950801234606_128373926@aol.com>

Some comments on small, tuned loops:

These antennas sometimes have extreme voltage and current nodes depending on their Q and the RF power used. When the loop conductor is very thick, Q goes up and bandwidth goes down. There is some material by W5QJR on the subject in the ARRL Antenna Book which I recommend for anyone interested in building "small" or "magnetic loops"... or to anyone who wants to know how antennas like the AEA or MFJ loops work.

Even in a less efficient loop with a thin conductor, I wonder if RF voltage could be arcing across the tuning cap? Also, some variable caps (especially surplus stuff) can have very strange values (example) 80-200 pF instead of 2-200 pF. Be sure your cap really is 3-100 pF.

I wonder about the incandescent lamp in the "Rockloop". Would it's filament add resistance or a small inductive reactance to the Rockloop, and would

removing the lamp change the antenna?

A version of the Rockloop I read about used a broadband toroid RF matching transformer between the 50 ohm coax and loop. Another thing to check would be the toroid. Is it the correct one? If the toroid is surplus or brand-x, you will never know what material it is since there is no standardization for toroid color codes.

72, Jay WB6AAM

From qrp-1@lehigh.edu Wed Aug 2 19:14:00 1995
From: mvjfm@mvubr.att.com (James M Fitton 508 960 2577)
Subject: [2199] Re: hamsticks
Message-ID: <9508021215.AA18161@ig1.att.att.com>

Bob,

Thanks for your info on the Hamstick.....

I have been making a few contacts each time I go on the air with the center roof magmount and the resulting very little ground, using my NorCal 40 at 2 watts.

Good advice on the ground system..... I will work on that.

Been thinking of parking and throwing out a few radials to see what they do. Maybe tonight.

Thanks again..... 72 Jim W1FMR

From qrp-1@lehigh.edu Wed Aug 2 19:14:00 1995
From: Robsparks@aol.com
Subject: hamsticks

Jim,

I noticed your posting on the qrp-1 re Hamsticks. I spoke to the gentleman at Lakeview, manufacturer of the Hamstick, yesterday re a mag mount for my vehicle. I had mounted the ant on the rear of my van, and try as I may, I could not get the swr below about 3:1. I was using the MFJ antenna analyzer for testing. He told me that the mag mounts would not give enough capacitive ground for the Hamstick, and to keep trying on my exisiting mount. He suggested ways to improve the grounding, which involved using copper braid from coax (more surface area) to replace the #18 wire that I was using. I had forgotten the thing about rf traveling on the surface of the conductor.

This is, according to Lakeview, VERY important. Anyway, thought I would mention this to you to pass on to your other hamstick friends. One other

thing : he said the ideal placment for the ant was in the top, center of the vehicle, on the roof. All in all, Lakeview was very, very helpful. Might be worth a call. Also, they are coming out with a new catalog soon.

Lakeview phone # 1-803-225-4565

Bob Sparks AB5ZD

From qrp-1@lehigh.edu Wed Aug 2 19:14:00 1995
From: rgobrick@public.compusult.nf.ca (Robert J. Gobrick)
Subject: [2188] Re: MFJ Accessories
Message-ID: <199508020131.XAA24270@public.compusult.nf.ca>

Craig,

You are becoming one heluva qrp hardware hacker - good job..

73/72 Bob V01DRB/WA6ERB

>I just installed the keyer in my 9030. While I had the soldering iron out to
>change the jumper to Curtis B, I modified the board to re-wire the paddle jack.
>With an Exacto knife, I cut the two traces between the connector and the dit
>and dah input pins on the chip. Then I soldered two small jumper wires to
>"criss-cross" these leads.
>

Bob Gobrick - V01DRB/WA6ERB/VE2DRB - Newfoundland, Canada
QRPer Galore - ARCI, GQRP, NORCAL, NEQRP, COQRP, MIQRP, NWQRP

Internet: rgobrick@public.compusult.nf.ca
bgobrick@terra.nlnet.nf.ca

Compuserve: 70466.1405@compuserve.com

From qrp-1@lehigh.edu Wed Aug 2 19:14:00 1995
From: rgobrick@public.compusult.nf.ca (Robert J. Gobrick)

Subject: [2184] Re: qrp digital?

Message-ID: <199508020104.WAA23723@public.compusult.nf.ca>

Reposted to QRP-L. Any experimentation going on for a 30 meter QRP digital mode rig??

David,

The HOT digital toy on the market right now is the HAL P38 HF DSP Modem. Clover, Amtor, Baudot, ASCII and Pactor all run off of a TI (I think) DSP chip that plugs in your PC. \$395. I have a Kam Plus and if I was just starting in I'd take a very serious look at the HAL unit instead.

I still say we need to look at a small "digital ready" 30 meter transceiver using the NE602 and FSK keying. Then we can hook up these PC's that seem to always be used for the Internet to do some REAL Radio communicating.

My personal feeling is the PK-232 (and PK-900 clone) has outlived itself and the AEA DSP-2232 will never see any decent application software especially at the price it goes for.

Good luck 73/72 Bob V01DRB/WA6ERB

>Hi gang!

>

>I am really getting the bug to get on some new (to me)

>modes. I am interested in

>what equipment people have and how they like it. I am

>leaning toward the AEA DSP-2232, even though it is high-

>priced, because I've heard that filtering is everything

>and dsp can provide the best filtering.

should I expect much improved

>performance using a PK-900 or DSP-2232? I welcome any

>and all ideas, opinions, and correspondence on the topic

>of qrp hf digital communication. Thanks!!!

>

>73/72,

>

>Dave

>

Bob Gobrick - V01DRB/WA6ERB/VE2DRB - Newfoundland, Canada
QRPer Galore - ARCI, GQRP, NORCAL, NEQRP, COQRP, MIQRP, NWQRP

Internet: rgobrick@public.compusult.nf.ca

bgobrick@terra.nlnet.nf.ca

Compuserve: 70466.1405@compuserve.com

From qrp-1@lehigh.edu Wed Aug 2 19:14:00 1995
From: James Lyons <jlyons@CAM.ORG>
Subject: [2196] Re: QRP Q on the streets (I think)
Message-ID: <199508021048.GAA20526@Stratus.CAM.ORG>

> giving us vastly better service than the old one did.) By the way,
> the worst horror story in recent memory, perhaps 2 years ago, was
> receiving the October issue the week AFTER Thanksgiving! (Old printer,
>
>
Mike,

That story loses its point up here where we celebrate Thanksgiving on
the second Monday of October!

Jim, VE2KN

From qrp-1@lehigh.edu Wed Aug 2 19:14:00 1995
From: cebik@UTKVX.UTCC.UTK.EDU
Subject: [2198] Re: QRP Q on the streets (I think)
Message-ID: <Pine.PMDF.3.91.950802074326.547401347A-100000@utkvx.utk.edu>

On Wed, 2 Aug 1995, James Lyons wrote:

> > giving us vastly better service than the old one did.) By the way,
> > the worst horror story in recent memory, perhaps 2 years ago, was
> > receiving the October issue the week AFTER Thanksgiving! (Old printer,
> Mike,
>
> That story loses its point up here where we celebrate Thanksgiving on
> the second Monday of October!
> Jim, VE2KN

I celebrate Thanksgiving every morning when I read the newspaper and do
not see my name in the obituaries.
LB, W4RNL

From qrp-1@lehigh.edu Wed Aug 2 19:14:00 1995
From: GREGOIRE@VALLEY.NET (ERNEST GREGOIRE)
Subject: [2204] Re: Radiokit
Message-ID: <199508021447.KAA17221@dartvax.dartmouth.edu>

>Is there anyone out there who is having trouble with Radio Kit?.

>I plan on calling Consumer Protection in New Hampshire tomorrow.

>

>Ken KD1XS

Hello Ken,
There is trouble indeed in River City. N1MVU bought a kit there, and
has been unable to get a response in many months about the design problem.

It seems that the final in the 40 meter rig has a design flaw and
radio kit does not return calls or letters. WA3ECT bought the same kit
with the same design problem, he gave up and bought an ARK 4.

There has been no resolution for either ham.

73 de AA1IK

Ernie

de AA1IK

(Lead by example, It is much easier)
(to pull a string than it is to push it.)

Ernie Gregoire

Canaan, NH.

()
()
(_____)

e-mail : GREGOIRE@VALLEY.NET

packet : AA1IK@WA1WOK.FN43FE.NH.USA

From qrp-1@lehigh.edu Wed Aug 2 19:14:00 1995
From: Bob Smith <rsmith@internetmci.com>
Subject: [2220] RE: sort of off the topic... E-Mail Connection
Message-ID: <01BA60F7.94A5EA80@usr14-dialup38.Atlanta.mci.net>

I use it too Geoff. Some groups put a little bit of text on the subject =

line that you can use to key the rules engine off of like the DSP list =
with TAPR. I think it would be great to do that here too. SYSOP can it =
be?? If it were something like QRP-L::<subject supplied by sender> alot =
of us could use that if nothing else to id the message as from the list. =

From: Geoff Fox[SMTP:gfox@ix.netcom.com]
Sent: Wednesday, August 02, 1995 9:11 AM
Subject: sort of off the topic... E-Mail Connection

-- [From: Geoff Fox * EMC.Ver #2.5.02] --

I have just stated using E-Mail Connection for my mail and it has a nice
feature allowing me to set rules to forward certain mail to their own
mailboxes. I'd like to do that with QRP-L, however, since the return
address on this list seems to be the person who sent the message, as =
opposed
to the list itself, there is no unifying parameter to use. Has anyone =
else
who uses this application figured a way around it?

73, Geoff WA1U

ps- In a very non-QRP move, I will probably transmit with the highest =
power
ever by a member of this list. It happens tomorrow and Friday as I use =
the
aggregate power of all the ABC Television affiliates. It's one of my =
quasi-
regular fillin stints on Good Morning America. I'll be the one in front =
of
the weather maps.

From qrp-l@lehigh.edu Wed Aug 2 19:14:00 1995
From: ARDAI@MAVEN.dnet.teradyne.com
Subject: [2214] Re: Super CW station
Message-ID: <01HTLLGWAH2Q008RWI@A1GATE.TERADYNE.COM>

[Hard to read the LCD on the N8UAU unit]

I don't have the schematic in front of me, but usually there is a contrast

pot wired as a voltage divider (+5 and ground) with the wiper going to the contrast pin (pin 3) of the LCD module. If there isn't enough contrast with the wiper grounded, you might want to try feeding a slight negative voltage to pin 3 (by lifting the grounded end of the pot and tying it to -5 or so instead).

/mike
n1list@netcom.com

From qrp-1@lehigh.edu Wed Aug 2 19:14:00 1995
From: "Charles A. Rubenstein" <rubenc@iglou.com>
Subject: [2206] Re: survey of Wilderness '40A builders
Message-ID: <Pine.SOL.3.91.950802111108.23228A-1000000@iglou.iglou.com>

OH BOY !!! My Norcal40A just got here in the mail! Words of wisdom, DONT HAVE IT SHIPPED TO YOUR JOB. I had crazy thoughts about starting it here. hi hi. The manual looks FIRST RATE, such a difference from the Radiokit QRP20 "manual" that accompanied it. Looks like even an attorney (I am) can do this one. Boy, I wonder if there is an AC outlet near counsel table in court this afternoon.....<back to reality>.

Charlie Rubenstein
KB8BWE@N8LHG.#CIN.OH.USA.NA
rubenc@iglou.com

From qrp-1@lehigh.edu Wed Aug 2 19:14:00 1995
From: myers@bigboy73.West.Sun.COM (Dana Myers)
Subject: [2216] Re: Urgent
Message-ID: <199508021855.LAA04420@sunspot.West.Sun.COM>

> From eleon@msu.edu Wed Aug 2 11:47:18 1995
> Originator: qrp-1@lehigh.edu
> From: eleon@msu.edu (Dr.Edgar Leon)
> To: Multiple recipients of list <qrp-1@lehigh.edu>
> Subject: Urgent
> X-Listprocessor-Version: 6.0c -- ListProcessor by Anastasios Kotsikonas
> X-Comment: Low Power Amateur Radio Discussion
> Date: Wed, 2 Aug 1995 14:44:09 EDT
>
> Please send no more messages until further notice. I will be out on
> vacations for 3 weeks. Thanks. Eleon@msu.edu

That's it!! QRP-L is hereby shut down for three weeks!!

;-)

From qrp-l@lehigh.edu Wed Aug 2 19:14:00 1995
From: spencew@primenet.com (Spence Wilhelm)
Subject: [2185] Re: Watt meter as a RF probe
Message-ID: <199508020110.SAA20380@mailhost.primenet.com>

At 12:20 PM 8/1/95 EDT, Bob Cutter wrote:

>This may be pushing the "there are no dumb questions" phrase, but can I use
>my WM-1 as an RF meter with a simple probe against ground?

Bob,

I'm not sure about the WM-1. But I built the RF probe from the ARRL
handbook and have had great success with it. The ARRL probe plugs into a
DVM in AC mode and indicates magnitudes of RF.

72,

Spence, KB7TCY

From qrp-l@lehigh.edu Wed Aug 2 19:14:00 1995
From: Steve.hideg.1@nd.edu (Steve Hideg)
Subject: [2200] Re: Well-done web page
Message-ID: <v02130511ac4520780934@[129.74.35.16]>

Thank you for the kind words. But please use the following url instead, the
other one is going away:

<http://qrp.cc.nd.edu/QRP-L/index.html>

Thanks.

--Steve

>If you have WWW access and haven't checked out the QRP-L equipment catalog,
>you're missing some neat stuff. Steve Hideg did a beautiful job with his
>web site. Here's the URL:

>

><http://ncc1701-d.cc.nd.edu/QRP-L/>

>
>There are some very nice color photos of the Sierra and NorCal 40A in the
>Wilderness Radio section of the catalog. Thanks, Steve!
>
>73,
>Wayne
>N6KR

Steve Hideg Macintosh Consultant/Analyst

Office of University Computing	Telephone: (219) 631-EXAM
G034 Computing Center/Math Building	E-mail: Steve.Hideg.1@nd.edu
University of Notre Dame	URL: http://www.nd.edu/~shideg/
Notre Dame, IN 46556	Ham Radio: N8HSC/9

"Why put off to tomorrow that which you can
put off until the day AFTER tomorrow?"

From qrp-1@lehigh.edu Wed Aug 2 19:14:00 1995
From: mitchell@dtcs70.dtc.Kodak.COM (Brad Mitchel)
Subject: [2201] Re: Well-done web page
Message-ID: <9508021320.AA00850@dtcs70.dtc.kodak.com>

Yes it is very well done, but last time I checked, I was the ONLY one that
submitted
pictures to the category " submitted from qrp-1 users" come on guys/gals , let's
see your
junk pile too!
73 Brad WB8YGG